

Quiz 7

Math 3C: Precalculus

December 2, 2019

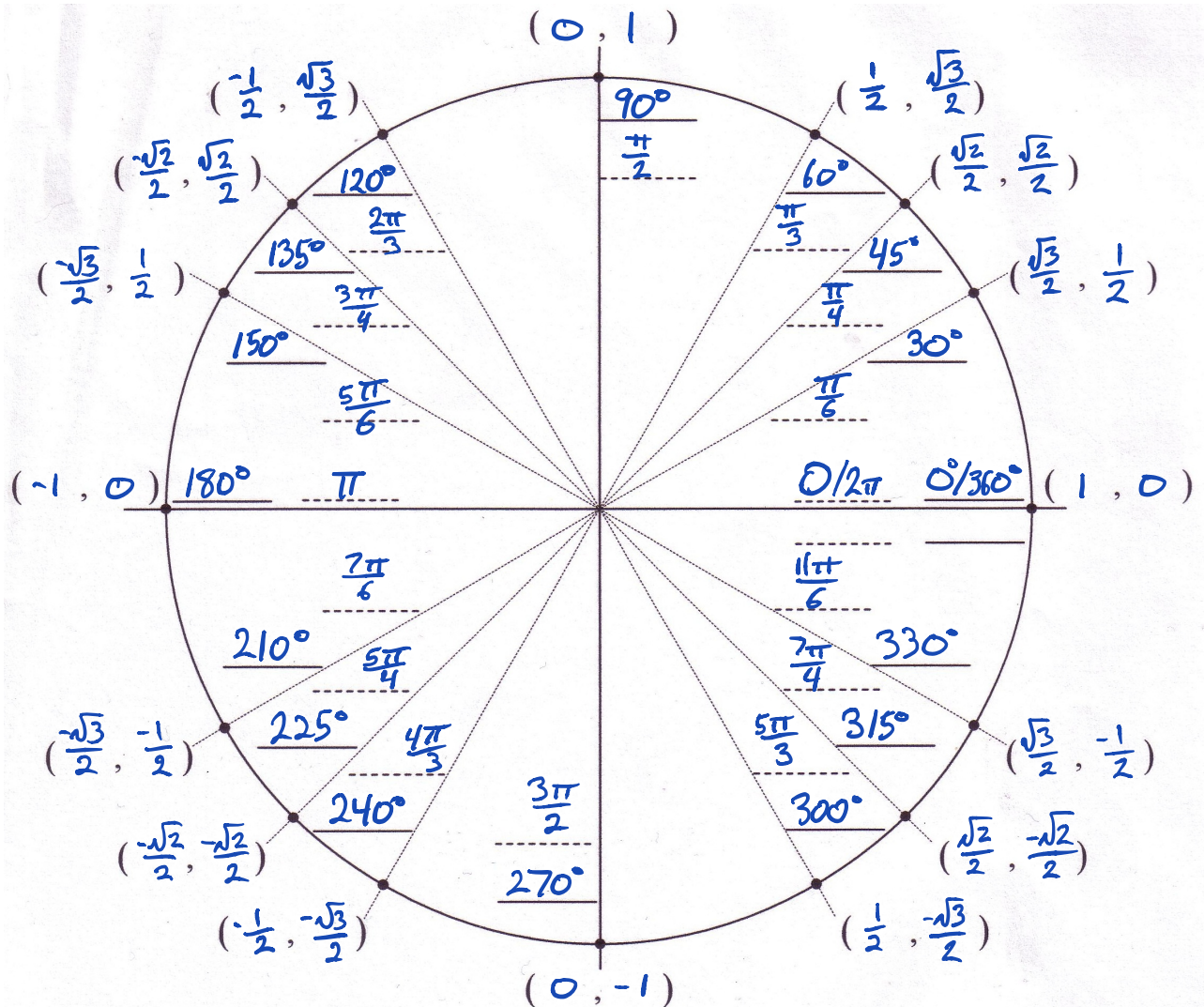
When you finish, please remain seated until class is dismissed

Name: Solutions

PID: _____

Problem 1 (10 points). Fill in the blanks of the unit circle drawn below. In the parentheses, write the **coordinates** of each point; on the solid line write the angle measure in **degrees**, and on the dotted line write the angle measure in **radians**.

(there are two extra lines near (1,0), you can leave those two blank)



EXTRA CREDIT:

(2 points each)

What is $\sec\left(\frac{4\pi}{3}\right)$?

$$\sec\left(\frac{4\pi}{3}\right) = \frac{1}{\cos\left(\frac{4\pi}{3}\right)} = \frac{1}{-\frac{1}{2}} = -2$$

What is the period of $f(x) = 6 \cos(3x)$?

vertical stretch (not relevant)

Horizontal stretch by factor of $\frac{1}{3}$

$$\frac{1}{3} \cdot 2\pi = \frac{2\pi}{3}$$

What is the range of $g(x) = -\sin(x) + 4$?

Range of $\sin(x)$: $[-1, 1]$

Range of $-\sin(x)$: $[-1, 1]$ (add 4)

Range of $-\sin(x) + 4$: $[3, 5]$